Underground Storage Tank Closure Report

Prepared for:
U.S. Army Corps of Engineers
New York District
1900 Hempstead Turnpike, Suite 316
East Meadow, New York 11554

Site:
Building No. 229
UST No. 229-1
Sievers-Sandberg United States Army Reserve Center
Pedricktown, New Jersey

Prepared by:
Earth Tech, Inc.
2229 Tomlynn Street
Richmond, Virginia 23230

July 28, 1997

Contract No. DACW31-95-D-0097
Delivery Order No. 0015
ET Job No. 21574

Client: United States Army Corps of Engineers
Project Name: Sievers-Sandberg United States Army Reserve Center, Building No. 229
Earth Tech Job No.: 21574

This document has been reviewed for technical content and quality, clarity, and style in accordance with the internal QA/QC procedures of Earth Tech, Inc.

Acknowledgments:

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Julio T. Cuna Jr.	Project Engineer	7-10-97
(Name)	(Title)	(Date)

New Jersey Professional Engineer (No. 35959):

Julio T. Cuna Jr.	Project Engineer	7-10-97
(Name)	(Title)	(Date)

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EXECUTIVE SUMMARY

This report details the clean closure of an underground storage tank (UST) and fulfills the requirements of Earth Tech, Inc.'s (Earth Tech's) site investigation reporting as detailed in the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for site remediation (NJAC 7:26E - 3.10).

Earth Tech has been contracted by the U.S. Army Corps of Engineers (USACE), Baltimore District, for the removal of a 220-gallon gasoline UST at Building No. 229 of the Sievers-Sandberg United States Army Reserve Center (USARC), Pedricktown, New Jersey, under Contract No. DACW31-95-D-0097, Delivery Order No. 0015.

Prior to tank closure, 200 gallons of gasoline were removed from the tank. Closure of the UST was conducted on May 12, 1997. The 220-gallon, steel UST was excavated and removed by Earth Tech, a NJDEP-approved UST closure contractor (Registration No. US00537). Upon removal, the UST condition was examined by a NJDEP-licensed UST Subsurface Evaluator (Registration No. US00516). No holes were observed in the UST upon removal. Earth Tech cut and cleaned the UST, which was then transported to Camden Iron to be recycled as scrap. The tank contents were transported by Casie Ecology Oil Salvage, Inc., Vineland, New Jersey, for recycling. The waste generated during tank cleaning activities was drummed and stored on site pending analytical results for disposal.

No soil staining was observed beneath the former base of the UST. Photoionizaton detector (PID) field screening indicated volatile organic vapor levels below 2 parts per million (ppm) for the excavation and excavated soils. The excavated soils were used as backfill material.

All sampling and analysis was performed in accordance with NJDEP Post-Remedial Action Requirements (NJAC 7:26E - 6.4). Three confirmatory soil samples were collected from the excavation base and sidewalls and analyzed for volatile organic compounds (VOCs) and lead using Methods 8260/624 and 3050, respectively, by a NJDEP-certified laboratory. The three confirmatory soil samples contained VOC concentrations below the detection limits for the compounds analyzed. Lead concentrations ranged from 24.5 milligrams per kilogram (mg/Kg) to 39.9 mg/Kg. These VOC and lead levels are below the most stringent NJDEP Soil Cleanup Criteria of 1,000 mg/Kg for VOCs and 400 mg/Kg for lead.

Based on field observations and analytical data, Earth Tech recommends no further action relative to the former UST.

1.0 INTRODUCTION

Earth Tech, Inc. (Earth Tech) has been contracted by the United States Army Corps of Engineers (USACE), Baltimore District, for the removal of underground storage tanks (USTs) at the Sievers-Sandberg United States Army Reserve Center (USARC), Pedricktown, New Jersey, under Contract No. DACW31-95-D-0097, Delivery Order No. 0015. This report details the clean closure of an UST at Building No. 229 at the USARC. A Site Location Map is included as Figure 1 in Appendix A. This report fulfills the requirements of Site Investigation reporting as detailed in the New Jersey Technical Requirements for Site Remediation (NJAC 7:26E-3.10). This report provides an overview of the site investigation, analytical results, and recommendations.

The USARC property was acquired by the USACE in 1917, and the Delaware Ordinance Depot was established at Pedricktown in 1918. The depot became the backup storage facility for the Picatinny and Frankfort Arsenals and the Aberdeen Proving Ground. In 1960, the Pedricktown facility became the headquarters for the 42nd and 43rd Artillery, which commanded the Nike Missile Sites in the Philadelphia area. In 1965, the Salem County Technical Institute gained control of the site. In the late 1960s, the 79th Army Reserve Command and the 21st Corps were replaced by the 78th Division of the Army reserves, which is still stationed at the facility. The eastern portion of the property is currently leased by the Salem Community College.

Building No. 229 was previously used as a water pumping station. The 220-gallon steel UST removed from the site was used to store gasoline fuel for the backup generator. The UST was a regulated tank (per NJAC 58:10); therefore, the UST was registered and an UST Closure Plan submitted to the New Jersey Department of Environmental Protection (NJDEP) prior to initiating closure activities. The NJDEP UST Closure Approval is included in Appendix B.

2.0 SITE ASSESSMENT

On May 12, 1997, Earth Tech, a NJDEP-approved UST Closure Contractor (Certification No. US00537), removed one 220-gallon steel UST at the site (See Figure 2, Appendix A). Photographic documentation of site activities is included in Appendix C. The UST was oriented parallel to the west side of Building No. 229. No utility lines were located in the vicinity of the UST. Prior to removal, approximately 200 gallons of gasoline were removed and disposed of by Casie Ecology Oil Salvage, Inc. A copy of the disposal manifest in included in Appendix D.

Earth Tech personnel screened the UST with a lower explosive limit (LEL) meter. Readings were taken before excavating and cutting the tank for cleaning. The LEL level registered four percent prior to excavating and cleaning the UST. Oxygen levels both before excavation and before cleaning were 20.5 percent. The tank was not purged prior to initiating tank closure activities based on the low vapor readings.

Upon tank removal, the UST condition was examined by Mr. Julian Canuso, Jr., a NJDEP-licensed UST Subsurface Evaluator (License No. US00516). No holes were observed in the UST. The UST measured approximately 6 feet long by 2.5 feet in diameter. Earth Tech personnel cut the UST at both ends to provide ventilation and access for tank cleaning. The tank was cleaned using absorbent/dry methods. The waste generated during tank cleaning activities was drummed and stored on site for later disposal pending analytical results. The tank disposal certificate is included in Appendix E.

Earth Tech personnel examined the UST excavation after removing the tank. No piping existed for this tank at the time of removal. No soil staining was observed beneath the former UST. Earth Tech screened the stockpiled soil and the bottom and sides of the excavation using a photoionization detector (PID). The maximum PID reading was less than 2 parts per million (ppm). Based on the PID field screening , no soils were deemed contaminated (i.e., PID readings greater than 100 ppm). Groundwater was not encountered in the excavation.

Confirmatory soil samples were collected in accordance with NJAC 7:26E-6.4. Earth Tech personnel collected a total of 3 soil samples, one from the excavation bottom (PED-B229-SS-01) and two from the excavation sidewalls (PED-B229-SS-02 and PED-B229-SS-03). See Figure 2 in Appendix A for sample locations. Soil samples were analyzed for Volatile Organic Compounds (VOCs) using United States Environmental Protection Agency (EPA) Method 8260/624 and lead using EPA Method 3050. The soil samples were analyzed by Toxikon, a NJDEP-certified laboratory.

Analytical results of soil samples collected from the excavation indicate VOC concentrations below the method detection limits. Lead concentrations ranged from 24.5 milligrams per kilogram (mg/Kg) to 39.9 mg/Kg. These concentrations are below the most stringent NJDEP Soil Cleanup Criteria of 1,000 mg/Kg for VOCs and 400 mg/Kg for lead. Soil analytical results are summarized in Table 1. Certificates of analysis and chain-of-custody forms are included as Appendix F. An executed NJDEP Site Inspection Report Checklist is included in Appendix G.

Table 1: Soil Analytical Results

Sample Designation and Location	Date Sampled	Depth (feet)	VOCs Method 8260/624 (μg/Kg)	Lead Method 3550 (mg/Kg)	PID (ppm)
PED-B229-1-SS-01 excavation bottom	5/12/97	3	ND	39.9	< 2.0
PED-B229-1-SS-02 east sidewall	5/12/97	3	ND	31.4	< 2.0
PED-B229-1-SS-03 west sidewall	5/12/97	3	ND	24.5	< 2.0

Notes:

ND Not Detected
mg/Kg Milligrams per kilogram
μg/Kg Micrograms per kilogram
PID Photoionization detector
ppm Parts per million
VOC Volatile Organic Compounds

The stockpiled soil generated during UST removal, along with imported clean fill, was used to backfill the excavation. No soils associated with the UST closure were removed from the site.

3.0 CONCLUSIONS

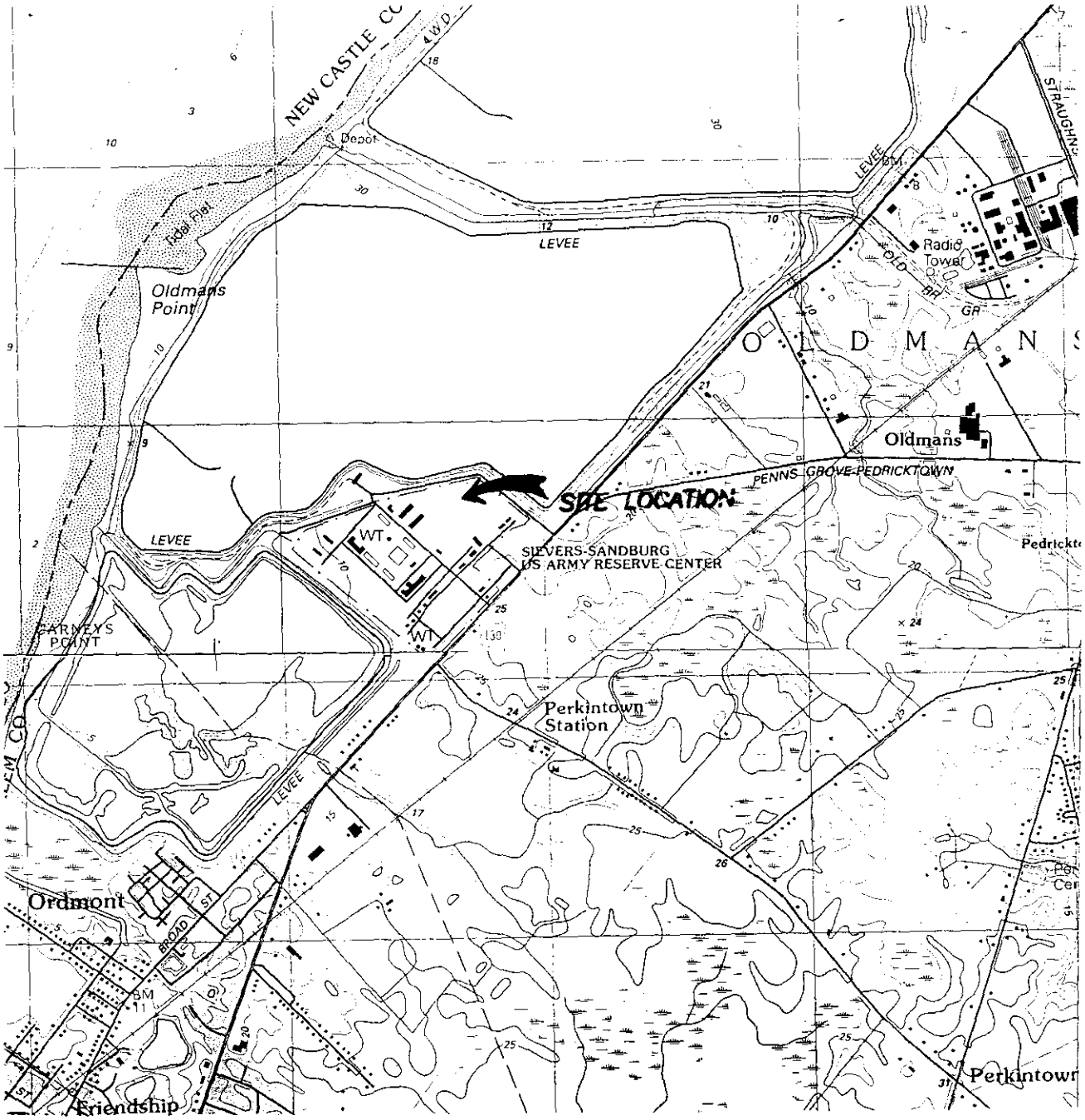
The following is a summary of Earth Tech's site investigation, findings, and tank closure activities for UST No. 229-1 at Building No. 229 at Sievers-Sandberg USARC:

- One 220-gallon registered UST used to store gasoline for Building No. 229 was removed from the site on May 12, 1997.
- Approximately 200 gallons of product were removed from the tank and transported by Casie Ecology Oil and Salvage, Inc., of Vineland, New Jersey, for recycling.
- No holes were observed in the tank.
- The cleaned UST was transported to Camden Iron and recycled as scrap.
- No product or stained soils were observed in the tank excavation.
- PID field screening was performed for excavated soils and soil remaining in the excavation. The highest reading was less than 2 ppm, which is below the screening level of 100 ppm used to segregate soils.
- Confirmatory soil samples were collected from the base and sidewalls of the UST excavation. Analytical results indicated VOC concentrations below detection limits, and lead concentrations ranging from 24.5 mg/Kg to 39.9 mg/Kg. These are below the NJDEP criteria of 1,000 mg/Kg for total VOCs in soil and 400 mg/Kg for lead in soil.

Based on the site investigation results, Earth Tech recommends no further action relative to the former UST at Building No. 229.

Appendix A

Figures



SOURCE:
U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
MARCUS HOOK, PA–NJ–DEL 1993
PHOTOREVISED 1995

U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
PENNS GROVE, NJ–DEL 1993
PHOTOREVISED 1995

CONTOUR INTERVAL = 10 FEET

GRAPHIC SCALE

2000 0 2000 4000

1" = 2000'

PROJECT:
SEIVERS–SANDBERG
U.S. ARMY RESERVE CENTER
PEDRICKTOWN, NEW JERSEY

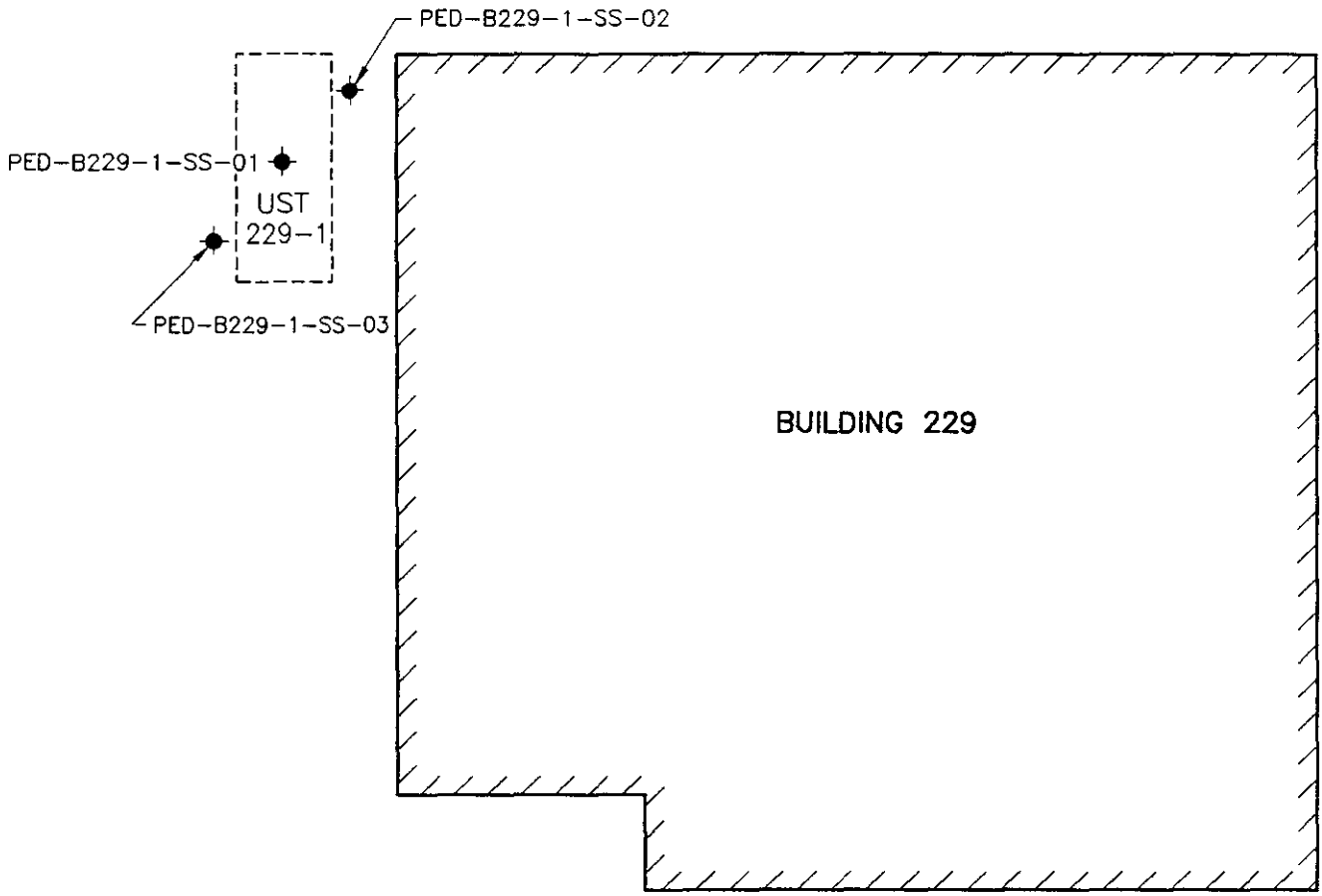
EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

FIGURE TITLE:
SITE LOCATION AND TOPOGRAPHY

PROJECT MANAGER:	PROJECT NO.:	DATE:	SCALE:	FIGURE NO.:
J.R.C.	21574	8/18/97	AS SHOWN	1

DRAWN BY:	REVIEWER:
B.W.D.	C.S.S.

CADD FILE: I:\DWG\BLOCKS\BORDERS\ET8511



NORTH

GRAPHIC SCALE

5 0 5 10

1" = 5'

LEGEND

PED-B229-1-SS-01 SOIL SAMPLE LOCATION AND DESIGNATION

PROJECT: BUILDING 229 SIEVERS – SANDBERG U.S. ARMY RESERVE CENTER PEDRICKTOWN, NEW JERSEY		EARTH TECH A tyco INTERNATIONAL LTD. COMPANY			
		FIGURE TITLE: GENERAL SITE DIAGRAM			
PROJECT MANAGER: J.R.C.	PROJECT NO.: 21574.01				
DRAWN BY: B.W.D.	REVIEWED BY: C.S.	DATE: 5/20/97	SCALE: AS SHOWN	FIGURE NO.: 2	

CADD FILE: C:\AC-JOBS\ETRS\SS2298

Appendix B

NJDEP UST Closure Approval

UNDERGROUND STORAGE TANK SYSTEM CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF FIELD OPERATIONS
CN-028, TRENTON, NJ 08625-0028

TMS #	**UST #**
C97-0177	0071994

SIEVERS-SANDBERG U.S. ARMY RESERVE CENTER
BLDG 273, ROUTE 130
PEDRICKTOWN

SALEM

THE ABOVE LISTED FACILITY IS HEREBY GRANTED APPROVAL TO PERFORM THE FOLLOWING ACTIVITY IN ACCORDANCE WITH N.J.A.C. 7:14b-1 et. seq:

REMOVAL OF:

PLEASE SEE ATTACHED TABLE

SITE ASSESSMENT: Conduct a site investigation for the UST(s) and appurtenant piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in the Attachment enclosed within.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a buisness that is also certified by the Department for that service.

CONTACT PERSON:	**TELEPHONE:**
JANIS CROWDER	804-358-5400

EFFECTIVE DATE: 04/03/97

THIS FORM MUST BE DISPLAYED AT THE SITE DURING THE APPROVED ACTIVITY AND MUST BE MADE AVAILABLE FOR INSPECTIONS AT ALL TIMES.

H. R. Patel
Joshua Gradwohl, SUPERVISOR
BUREAU OF FIELD OPERATIONS

(701)

Table 2 Analytical Methods for Verification Samples

Tank Identification	Tank Size (gallons)	Assumed Tank Length (feet)	Contents	Excavation Sample IDs	Petroleum-Contaminated Stockpile Sample IDs	Analysis	Method	Turnaround Time
413NW	14,000	25	unleaded gasoline	PED-413NW-SS-01 through PED-413NW-SS-07	PED-413NW-SP-01	VO+10*	8260	10 days
413SW	10,000	17	diesel	PED-413SW-SS-01 through PED-413NW-SS-06	PED-413SW-SP-01	TPHC **	418.1	10 days
413W	1,000	10	waste oil	PED-413W-SS-01 through PED-413W-SS-04	PED-413W-SP-01	TPHC***	418.1	10 days
413NE	*5,000*	24	unleaded gasoline	PED-413NE-SS-01 through PED-413NE-SS-07	PED-413NE-SP-01	VO+10*	8260	10 days
413E	*5,000*	24	unleaded gasoline	PED-413E-SS-01 through PED-413E-SS-07	PED-413E-SP-01	VO+10*	8260	10 days
413SE	*5,000*	24	unleaded gasoline	PED-413SE-SS-01 through PED-413SE-SS-07	PED-413SE-SP-01	VO+10*	8260	10 days
404-1	550	6	unleaded gasoline	PED-404.1-SS-01 through PED-404.1-SS-03	PED-404.1-SP-01	VO+10*	8260	10 days
282-1	1,000	10	heating oil	PED-282.1-SS-01 through PED-282.1-SS-04	PED-282.1-SP-01	TPHC **	418.1	10 days
283-1	1,500	9	heating oil	PED-283.1-SS-01 through PED-283.1-SS-04	PED-283.1-SP-01	TPHC **	418.1	10 days
272-1	*1,000*	10	heating oil	PED-272.1-SS-01 through PED-272.1-SS-04	PED-272.1-SP-01	TPHC **	418.1	10 days
272-2	*1,000*	10	heating oil	PED-272.2-SS-01 through PED-272.2-SS-04	PED-272.2-SP-01	TPHC **	418.1	10 days
272-3	*1,000*	10	heating oil	PED-272.3-SS-01 through PED-272.3-SS-04	PED-272.3-SP-01	TPHC **	418.1	10 days
190-1	*1,000*	10	diesel	PED-190.1-SS-01 through PED-190.1-SS-04	PED-190.1-SP-01	TPHC **	418.1	10 days
220W	1,000	10	heating oil	PED-220W-SS-01 through PED-220W-SS-04	PED-220W-SP-01	TPHC **	418.1	10 days
220SW	1,000	10	heating oil	PED-220SW-SS-01 through PED-220SW-SS-04	PED-220SW-SP-01	TPHC **	418.1	10 days
233-1	*1,000*	10	diesel	PED-233.1-SS-01 through PED-233.1-SS-04	PED-233.1-SP-01	TPHC **	418.1	10 days
235-1	1,000	10	heating oil	PED-235.1-SS-01 through PED-235.1-SS-04	PED-235.1-SP-01	TPHC **	418.1	10 days
235-2	*1,000*	10	heating oil	PED-235.2-SS-01 through PED-235.2-SS-04	PED-235.2-SP-01	TPHC **	418.1	10 days
225-1	1,000	10	heating oil	PED-225.1-SS-01 through PED-225.1-SS-04	PED-225.1-SP-01	TPHC **	418.1	10 days
229-1	275	5	unleaded gasoline	PED-229.1-SS-01 through PED-229.1-SS-03	PED-229.1-SP-01	VO+10*	8260	10 days
270-1	275	5	heating oil	PED-270.1-SS-01 through PED-270.1-SS-03	PED-270.1-SP-01	TPHC **	418.1	10 days
426-1	1,000	10	heating oil	PED-426.1-SS-01 through PED-426.1-SS-04	PED-426.1-SP-01	TPHC **	418.1	10 days
468-1	275	5	heating oil	PED-268.1-SS-01 through PED-268.1-SS-03	PED-268.1-SP-01	TPHC **	418.1	10 days

* Analyze sample for lead if UST formerly contained leaded gasoline

** Analyze sample for VO+10 if TPHC > 1000 ppm

*** Analyze sample for VO+10, BNs+15, PCBs, and PP-metals if TPHC is detected in the sample.

VO+10 - volatile organic compounds plus 10 peaks including xylenes, target compound list or priority pollutant VO with library search; EPA Method 8260

TPHC - total petroleum hydrocarbons; EPA Method 418.1

BNs+15 - based neutral compounds plus 15 peaks by target compound list or priority pollutant list with library search; EPA Method 8270

PCB - polychlorinated biphenyls; EPA Method 8080

PP-metals - priority pollutants

For each tank, collect two soil samples from the bottom of the sidewalls of the excavation, and one soil sample every 5 feet along the center line of the excavation.

Italicized tank sizes are approximate.

Appendix C

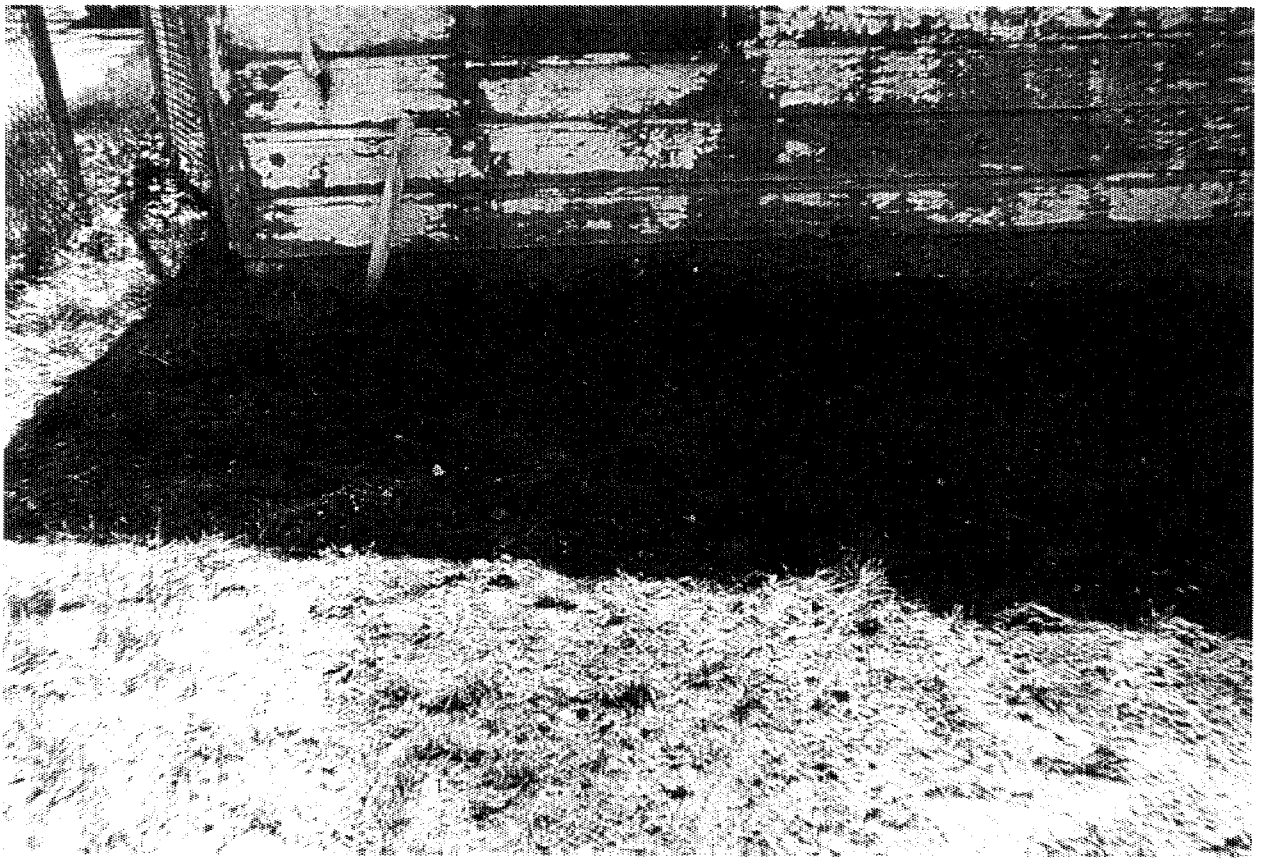
Photographs

Photograph No.: 1 Contract No.: DACW31-95-D-0097 Earth Tech Job No. 21574
Location: Pedricktown U.S. Army Reserve Center D.O. No.: 015
Photographer: D. Mothershead Date: 5/12/96
Description: Site prior to excavation of UST at Building No. 229. Direction: East.

Photograph No.: 2 Contract No.: DACW31-95-D-0097 Earth Tech Job No. 21574
Location: Pedricktown U.S. Army Reserve Center D.O. No.: 015
Photographer: D. Mothershead Date: 5/12/96
Description: Excavation of UST at Building No. 229. Direction: East.

Photograph No.: 3 Contract No.: DACW31-95-D-0097 Earth Tech Job No. 21574
Location: Pedricktown U.S. Army Reserve Center D.O. No.: 015
Photographer: D. Mothershead Date: 5/12/96
Description: Excavation after UST removal at Building No. 229. Direction: East.

Photograph No.: 4 Contract No.: DACW31-95-D-0097 Earth Tech Job No. 21574
Location: Pedricktown U.S. Army Reserve Center D.O. No.: 015
Photographer: D. Mothershead Date: 5/12/96
Description: Site after backfilling UST excavation at Building No. 229. Direction: East.



Photograph No.: 5 Contract No.: DACW31-95-D-0097 Earth Tech Job No. 21574
Location: Pedricktown U.S. Army Reserve Center D.O. No.: 015
Photographer: D. Mothershead Date: 5/12/96
Description: Site restoration at Building No. 229. Direction: East.

Appendix D

Liquid Disposal Manifest

CASIE ECOLOGY OIL SALVAGE, INC.

FACILITY PERMIT NUMBER (0614D1HP05)
CERTIFICATE OF RECYCLING / DISPOSAL

Generator: U.S. Army Corps Engineers

EPA ID#: Not Required

Site Address: 273 Garrison Road
Pedricktown, NJ 08067

Casie Ecology Oil Salvage, Inc. has accepted petroleum material for recycling, in accordance with all applicable Federal and State regulations.

CASIE/PROTANK
3209 N. Mill Road
Vineland, NJ 08360
(609) 696-4401

SEAL

Waste Manifest Number: NHZ0200 4996
Number of Gallons: 250
Date Accepted: 05/09/97

Gary Johnstone, Compliance Officer

CASIE / PROTANK
ENVIRONMENTAL SERVICES

se type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No. N O N E R E Q U I R E D | Document No. 0 1 8 2 6

2. Page 1 of 1

3. Generator's Name and Mailing Address: U.S. Army Corps of Engineers, 273 Garrison Road, Pedricktown NJ 08067

4. Generator's Phone (609) 299-2879

A. Non-hazardous Manifest Document Number: NHZ0200 4996

B. State Generator's ID: SAME

5. Transporter 1 Company Name: Casie Ecology Oil Salvage, Inc.

6. US EPA ID Number: N J D 0 4 5 9 9 5 6 9 3

C. State Trans. ID: 0963147

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (609) 696-4401

E. State Trans. ID

9. Designated Facility Name and Site Address: Casie Ecology Oil Salvage, Inc. T/A Casie Protank, 3209 N. Mill Rd, Vineland NJ 08360

10. US EPA ID Number: N J D 0 4 5 9 9 5 6 9 3

F. Transporter's Phone ( )

G. State Facility ID: 061DD1HP05

H. Facility's Phone (609) 696-4401

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	L Waste No.
a. Flammable liquids, n.o.s. (Gasoline) 3, UN1993, PGIII	001	TT	00250	G	ID72
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

a. L,T,I 92% oil/sed. 8% wtr.

K. Handling Codes for Wastes Listed Above

a. F-tar list SD2

15. Special Handling Instructions and Additional Information

a.24 Hr. Emergency Response #609 696-4401 K. Ambrosia NAERG# 128

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261, 264 and 279 or any applicable state law.

Printed/Typed Name: X John D. Mothershead — Signature: X — Month Day Year: 05 09 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Del Arnold — Signature: Del Arnold — Month Day Year: 05 09 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Brian Battaglia — Signature: Brian Battaglia — Month Day Year: 05 09 97

GENERATOR | TRANSPORTER | FACILITY

2-TRANSPORTER 1 COPY

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

Appendix E

Tank Disposal Certificate

Environmental Technology Incorporated
Certification of Tank Disposal

(In accordance with American Petroleum Institute recommended practice)

Client: US ARMY CORPS OF ENGINEER | Job No. | Date: 15 MAY 97

Site from which the tank was removed: SIEVERS - SANBERG ARMY RESERVE

Site to which the tank is to be transported for final disposal:

Tank Description

Size	Type (steel, fiberglass, etc.)	Condition
220	STEEL	GOOD

Prior Contents: GASOLINE

Tank Markings: NONE

Cleaning Certification

This is to certify that the above described tank has been cleaned in accordance with API methods and procedures and has been rendered suitable for disposal as scrap. All product residues were removed and the interior of the tank was tested and found to be free of harmful vapors.

Signed | Company: Environmental Technology Incorporated | Date: 15 MAY 97

Transportation

This is to certify that the above described tank has been received and will be transported to the disposal site as specified above.

Signed (driver) | Shipper or Hauler | Date: 5-15-97

Received for Disposal

This is to certify that the above described tank has been received for disposal and will be disposed of in accordance with applicable regulatory requirements.

Signed | Disposal Facility: Camden Iron + metal | Date

Comments

* FAX BACK TO 804-358-6868
SIGN & RETURN

Appendix F

Laboratory Certificates and Chain-of-Custody

 TOXIKON CORP. REPORT Work Order # 97-05-197

Received: 05/13/97 05/20/97 15:56:03

REPORT TO: EARTH TECH REMEDIATION
2229 TOMLYNN ST.
RICHMOND, VA. 23230
804-358-5400 FAX: 358-6868
ATTEN JANIS CROWDER

PREPARED BY: TOXIKON CORPORATION
15 WIGGINS AVE
BEDFORD, MA 01730
ATTEN PAUL LEZBERG
PHONE (617)275-3330

CERTIFIED BY

CONTACT CHUCKC

CLIENT EARTHTECH VA SAMPLES 18
COMPANY EARTH TECH REMEDIATION
FACILITY 2229 TOMLYNN ST.
RICHMOND, VA. 23230

MA CERT # M-MA064: TRACE METALS, SULFATE,CYANIDE,RES. FREE CHLORINE, Ca, TOTAL ALK., TDS, pH, THMs, VOC, PEST.,NUTRIENTS. DEMAND. O&G, PHENOLICS, PCBs . CT DHS #PH-0563, NY #10778 FL HRS E87143, NJ DEP 59538, NC DNR286, SC 88002, NH 204091-C.

WORK ID PEDRICKTOWN, NJ
TAKEN 5/12/97
TRANS
TYPE SOIL
P.O. # 21574
INVOICE under separate cover

VERIFIED BY:
CERT # M-MA064

SAMPLE IDENTIFICATION

01 PED-B229-SS-01
02 PED-B229-SS-02
03 PED-B229-SS-03
04 PED-B413NW-SS-01
05 PED-B413NW-SS-02
06 PWD-B413NW-SS-03
07 PED-B413NW-SS-04
08 PED-B413NW-SS-05
09 PED-B413NW-SS-06
10 PED-B413NW-SS-07
11 PED-B413NW-SS-08
12 PED-B413NW-D-07
13 PED-B404-1-SS-01
14 PED-B404-1-SS-02
15 PED-B404-1-SS-03
16 PED-B413NW-SS-09
17 PED-B413NW-SS-10
18 TRIP BLANK

TEST CODES and NAMES used on this workorder

8260	PURGEABLE ORGANICS VOA
MEX TS	METALS, TOTAL EXT., SOIL
PB	LEAD
TICV	T.I.C. Volatiles

SAMPLE ID TRIP BLANK FRACTION 18A TEST CODE 8260 NAME PURGEABLE ORGANICS VOA
Date & Time Collected not specified Category WATER

EPA 8260 PURGEABLE ORGANICS

	RESULT	LIMIT		RESULT	LIMIT
Chloromethane	ND	10	o-Xylene	ND	5.0
Bromomethane	ND	5.0	m-Xylene	ND	5.0
Vinyl Chloride	ND	2.0	p-Xylene	ND	5.0
Chloroethane	ND	10	1,2-Dichlorobenzene	ND	5.0
Methylene Chloride	ND	10	1,3-Dichlorobenzene	ND	5.0
1,1-Dichloroethene	ND	5.0	1,4-Dichlorobenzene	ND	5.0
Trichlorofluoromethane	ND	10	Naphthalene	ND	10
1,1-Dichloroethane	ND	5.0	n-Propylbenzene	ND	10
Trans-1,2-Dichloroethene	ND	5.0	Bromobenzene	ND	5.0
Chloroform	ND	5.0	Bromchloromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	n-Butylbenzene	ND	10
1,1,1-Trichloroethane	ND	5.0	sec-Butylbenzene	ND	10
Carbon Tetrachloride	ND	5.0	tert-Butylbenzene	ND	10
Bromodichloromethane	ND	5.0	2-Chlorotoluene	ND	5.0
1,2-Dichloropropane	ND	5.0	4-Chlorotoluene	ND	5.0
Trichloroethene	ND	5.0	1,2-Dibromo-3-chloropropane	ND	5.0
Dibromochloromethane	ND	5.0	1,2-Dibromomethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0	Dibromomethane	ND	5.0
Benzene	ND	5.0	Dichlorodifluoromethane	ND	10
1,1-Dichloropropene	ND	5.0	cis-1,2-Dichloroethene	ND	5.0
2-2-Dichlorpropane	ND	5.0	1,3-Dichloropropane	ND	5.0
Bromoform	ND	5.0	1,1,1,2-Tetrachloroethane	ND	5.0
Hexachlorobutadiene	ND	10	1,2,3-Trichlorobenzene	ND	5.0
Isopropylbenzene	ND	10	1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0	1,2,4-Trichlorobenzene	ND	5.0
Methyl tertiary butyl ether	ND	5.0	1,2,3-Trichloropropane	ND	5.0
Toluene	ND	5.0	1,2,4-Trimethylbenzene	ND	10
Chlorobenzene	ND	5.0	1,3,5-Trimethylbenzene	ND	10
Ethyl Benzene	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
p-Isopropyltoluene	ND	10	trans-1,3-Dichloropropene	ND	5.0
			Styrene	ND	5.0

Notes and definitions for this report:
DATE RUN 05/16/97
ANALYST CMD
INSTRUMENT B
DIL. FACTOR 1
UNITS ug/L
COMMENTS

ND = Not detected at detection limit

Received: 05/13/97 Results by Sample

SAMPLE ID TRIP BLANK FRACTION 18A TEST CODE TICV NAME T.I.C. Volatiles
Date & Time Collected not specified Category WATER

SUMMARY OF NBS (38,700+ analyte version, April '82)
LIBRARY SEARCH RESULTS OF NONTARGETED PEAKS WITH ESTIMATED
CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
VOLATILE ORGANICS

SCAN NUM.	NAME OF COMPOUND	MF PUR	ASSESSMENT RS	ISO (1)	UK	EST. CONC. (2)	CAS #	RT (3)

Notes and Definitions for this Report:
UNITS..... ug/L
DATE..... 05/16/97
SPECTROSCOPIST... CMD
Comments:
NO UNKNOWN PEAKS DETECTED

(1) RS - Reasonable Identification *
ISO- Isomer or similar compound
UK - Unknown, not in NBS Library
(2) Calculated vs nearest eluting internal standard as a simple ratio / proportion.
(3) RT vs 1,4-dichlorobutane for volatiles.
* This shall mean the assessment of the library search by an experienced mass spec. interpretation specialist which would by his/her concurrence be a good identification using WA85-J664, J680, Task V on page A-3 & Task III pg 2-3

TEST CODE 8260 NAME PURGEABLE ORGANICS VOA

EPA METHOD: 8260: Gas Chromatography/Mass Spectrometry for Volatile Organics.

Reference: Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

TEST CODE MEX TS NAME METALS, TOTAL EXT., SOIL

REFERENCE:
EPA METHOD 3050: Acid Digestion of Sediments, Sludges and Soils. Test Methods for Evaluating Solid Waste Physical/Chemical Methods. SW 846, 3rd Edition.

Analytical Method for ICP:6010A

TEST CODE TICV NAME T.I.C. Volatiles

EPA METHOD: 624

Reference: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A. 40CFR Part 136. Federal Register Vol. 49, No. 209, 1984.

Received: 05/13/97 Results by Sample

SAMPLE ID PED-B229-SS-01 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 05/12/97 10:15:00 Category SOIL

PB	39.9
mg/Kg DL=2.69	

SAMPLE ID PED-B229-SS-01 FRACTION 01A TEST CODE 8260 NAME PURGEABLE ORGANICS VOA
Date & Time Collected 05/12/97 10:15:00 Category SOIL

EPA 8260 PURGEABLE ORGANICS

	RESULT	LIMIT		RESULT	LIMIT
Chloromethane	ND	10	o-Xylene	ND	5.0
Bromomethane	ND	5.0	m-Xylene	ND	5.0
Vinyl Chloride	ND	2.0	p-Xylene	ND	5.0
Chloroethane	ND	10	1,2-Dichlorobenzene	ND	5.0
Methylene Chloride	ND	10	1,3-Dichlorobenzene	ND	5.0
1,1-Dichloroethene	ND	5.0	1,4-Dichlorobenzene	ND	5.0
Trichlorofluoromethane	ND	10	Naphthalene	ND	10
1,1-Dichloroethane	ND	5.0	n-Propylbenzene	ND	10
Trans-1,2-Dichloroethene	ND	5.0	Bromobenzene	ND	5.0
Chloroform	ND	5.0	Bromchloromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	n-Butylbenzene	ND	10
1,1,1-Trichloroethane	ND	5.0	sec-Butylbenzene	ND	10
Carbon Tetrachloride	ND	5.0	tert-Butylbenzene	ND	10
Bromodichloromethane	ND	5.0	2-Chlorotoluene	ND	5.0
1,2-Dichloropropane	ND	5.0	4-Chlorotoluene	ND	5.0
Trichloroethene	ND	5.0	1,2-Dibromo-3-chloropropane	ND	5.0
Dibromochloromethane	ND	5.0	1,2-Dibromomethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0	Dibromomethane	ND	5.0
Benzene	ND	5.0	Dichlorodifluoromethane	ND	10
1,1-Dichloropropene	ND	5.0	cis-1,2-Dichloroethene	ND	5.0
2-2-Dichlorpropane	ND	5.0	1,3-Dichloropropane	ND	5.0
Bromoform	ND	5.0	1,1,1,2-Tetrachloroethane	ND	5.0
Hexachlorobutadiene	ND	10	1,2,3-Trichlorobenzene	ND	5.0
Isopropylbenzene	ND	10	1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0	1,2,4-Trichlorobenzene	ND	5.0
Methyl tertiary butyl ether	ND	5.0	1,2,3-Trichloropropane	ND	5.0
Toluene	ND	5.0	1,2,4-Trimethylbenzene	ND	10
Chlorobenzene	ND	5.0	1,3,5-Trimethylbenzene	ND	10
Ethyl Benzene	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
p-Isopropyltoluene	ND	10	trans-1,3-Dichloropropene	ND	5.0
			Styrene	ND	5.0

Notes and definitions for this report:

DATE RUN 05/15/97
ANALYST CMD
INSTRUMENT G
DIL. FACTOR 1
UNITS ug/Kg
COMMENTS

ND = Not detected at detection limit

SAMPLE ID PED-B229-SS-01 FRACTION 01A TEST CODE TICV NAME T.I.C. Volatiles
Date & Time Collected 05/12/97 10:15:00 Category SOIL

SUMMARY OF NBS (38,700+ analyte version, April '82)
LIBRARY SEARCH RESULTS OF NONTARGETED PEAKS WITH ESTIMATED
CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
VOLATILE ORGANICS

SCAN NUM.	NAME OF COMPOUND	MF PUR	ASSESSMENT RS	ISO (1)	UK	EST. CONC. (2)	CAS #	RT (3)

Notes and Definitions for this Report:
UNITS..... ug/Kg
DATE..... 05/15/97
SPECTROSCOPIST... CMD
Comments:
NO UNKNOWN PEAKS DETECTED.

(1) RS - Reasonable Identification *
ISO- Isomer or similar compound
UK - Unknown, not in NBS Library
(2) Calculated vs nearest eluting internal standard as a simple ratio / proportion.
(3) RT vs 1,4-dichlorobutane for volatiles.
* This shall mean the assessment of the library search by an experienced mass spec. interpretation specialist which would by his/her concurrence be a good identification using WA85-J664, J680, Task V on page A-3 & Task III pg 2-3

SAMPLE ID PED-B229-SS-02 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 05/12/97 10:15:00 Category SOIL

PB	31.4
mg/Kg DL=2.69	

Received: 05/13/97 Results by Sample

SAMPLE ID PED-B229-SS-02 FRACTION 02A TEST CODE 8260 NAME PURGEABLE ORGANICS VOA
Date & Time Collected 05/12/97 10:15:00 Category SOIL

EPA 8260 PURGEABLE ORGANICS

	RESULT	LIMIT		RESULT	LIMIT
Chloromethane	ND	10	o-Xylene	ND	5.0
Bromomethane	ND	5.0	m-Xylene	ND	5.0
Vinyl Chloride	ND	2.0	p-Xylene	ND	5.0
Chloroethane	ND	10	1,2-Dichlorobenzene	ND	5.0
Methylene Chloride	ND	10	1,3-Dichlorobenzene	ND	5.0
1,1-Dichloroethene	ND	5.0	1,4-Dichlorobenzene	ND	5.0
Trichlorofluoromethane	ND	10	Naphthalene	ND	10
1,1-Dichloroethane	ND	5.0	n-Propylbenzene	ND	10
Trans-1,2-Dichloroethene	ND	5.0	Bromobenzene	ND	5.0
Chloroform	ND	5.0	Bromchloromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	n-Butylbenzene	ND	10
1,1,1-Trichloroethane	ND	5.0	sec-Butylbenzene	ND	10
Carbon Tetrachloride	ND	5.0	tert-Butylbenzene	ND	10
Bromodichloromethane	ND	5.0	2-Chlorotoluene	ND	5.0
1,2-Dichloropropane	ND	5.0	4-Chlorotoluene	ND	5.0
Trichloroethene	ND	5.0	1,2-Dibromo-3-chloropropane	ND	5.0
Dibromochloromethane	ND	5.0	1,2-Dibromomethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0	Dibromomethane	ND	5.0
Benzene	ND	5.0	Dichlorodifluoromethane	ND	10
1,1-Dichloropropene	ND	5.0	cis-1,2-Dichloroethene	ND	5.0
2-2-Dichlorpropane	ND	5.0	1,3-Dichloropropane	ND	5.0
Bromoform	ND	5.0	1,1,1,2-Tetrachloroethane	ND	5.0
Hexachlorobutadiene	ND	10	1,2,3-Trichlorobenzene	ND	5.0
Isopropylbenzene	ND	10	1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0	1,2,4-Trichlorobenzene	ND	5.0
Methyl tertiary butyl ether	ND	5.0	1,2,3-Trichloropropane	ND	5.0
Toluene	ND	5.0	1,2,4-Trimethylbenzene	ND	10
Chlorobenzene	ND	5.0	1,3,5-Trimethylbenzene	ND	10
Ethyl Benzene	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
p-Isopropyltoluene	ND	10	trans-1,3-Dichloropropene	ND	5.0
			Styrene	ND	5.0

Notes and definitions for this report:
DATE RUN 05/15/97
ANALYST CMD
INSTRUMENT G
DIL. FACTOR 1
UNITS ug/Kg
COMMENTS

ND = Not detected at detection limit

Received: 05/13/97 Results by Sample

SAMPLE ID PED-B229-SS-02 FRACTION 02A TEST CODE TICV NAME T.I.C. Volatiles
Date & Time Collected 05/12/97 10:15:00 Category SOIL

SUMMARY OF NBS (38,700+ analyte version, April '82)
LIBRARY SEARCH RESULTS OF NONTARGETED PEAKS WITH ESTIMATED
CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
VOLATILE ORGANICS

SCAN NUM.	NAME OF COMPOUND	MF PUR	ASSESSMENT RS	ISO (1)	UK	EST. CONC. (2)	CAS #	RT (3)

Notes and Definitions for this Report:
UNITS..... ug/Kg
DATE..... 05/15/97
SPECTROSCOPIST... CMD
Comments:
NO UNKNOWN PEAKS DETECTED.

(1) RS - Reasonable Identification *
ISO- Isomer or similar compound
UK - Unknown, not in NBS Library
(2) Calculated vs nearest eluting internal standard as a simple ratio / proportion.
(3) RT vs 1,4-dichlorobutane for volatiles.
* This shall mean the assessment of the library search by an experienced mass spec. interpretation specialist which would by his/her concurrence be a good identification using WA85-J664, J680, Task V on page A-3 & Task III pg 2-3

SAMPLE ID PED-B229-SS-03 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 05/12/97 11:15:00 Category SOIL

PB	24.5
mg/Kg DL=2.69	

Received: 05/13/97 Results by Sample

SAMPLE ID PED-B229-SS-03 FRACTION 03A TEST CODE 8260 NAME PURGEABLE ORGANICS VOA
Date & Time Collected 05/12/97 11:15:00 Category SOIL

EPA 8260 PURGEABLE ORGANICS

	RESULT	LIMIT		RESULT	LIMIT
Chloromethane	ND	10	o-Xylene	ND	5.0
Bromomethane	ND	5.0	m-Xylene	ND	5.0
Vinyl Chloride	ND	2.0	p-Xylene	ND	5.0
Chloroethane	ND	10	1,2-Dichlorobenzene	ND	5.0
Methylene Chloride	ND	10	1,3-Dichlorobenzene	ND	5.0
1,1-Dichloroethene	ND	5.0	1,4-Dichlorobenzene	ND	5.0
Trichlorofluoromethane	ND	10	Naphthalene	ND	10
1,1-Dichloroethane	ND	5.0	n-Propylbenzene	ND	10
Trans-1,2-Dichloroethene	ND	5.0	Bromobenzene	ND	5.0
Chloroform	ND	5.0	Bromchloromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	n-Butylbenzene	ND	10
1,1,1-Trichloroethane	ND	5.0	sec-Butylbenzene	ND	10
Carbon Tetrachloride	ND	5.0	tert-Butylbenzene	ND	10
Bromodichloromethane	ND	5.0	2-Chlorotoluene	ND	5.0
1,2-Dichloropropane	ND	5.0	4-Chlorotoluene	ND	5.0
Trichloroethene	ND	5.0	1,2-Dibromo-3-chloropropane	ND	5.0
Dibromochloromethane	ND	5.0	1,2-Dibromomethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0	Dibromomethane	ND	5.0
Benzene	ND	5.0	Dichlorodifluoromethane	ND	10
1,1-Dichloropropene	ND	5.0	cis-1,2-Dichloroethene	ND	5.0
2-2-Dichlorpropane	ND	5.0	1,3-Dichloropropane	ND	5.0
Bromoform	ND	5.0	1,1,1,2-Tetrachloroethane	ND	5.0
Hexachlorobutadiene	ND	10	1,2,3-Trichlorobenzene	ND	5.0
Isopropylbenzene	ND	10	1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0	1,2,4-Trichlorobenzene	ND	5.0
Methyl tertiary butyl ether	ND	5.0	1,2,3-Trichloropropane	ND	5.0
Toluene	ND	5.0	1,2,4-Trimethylbenzene	ND	10
Chlorobenzene	ND	5.0	1,3,5-Trimethylbenzene	ND	10
Ethyl Benzene	ND	5.0	cis-1,3-Dichloropropene	ND	5.0
p-Isopropyltoluene	ND	10	trans-1,3-Dichloropropene	ND	5.0
			Styrene	ND	5.0

Notes and definitions for this report:

DATE RUN 05/15/97
ANALYST CMD
INSTRUMENT G
DIL. FACTOR 1
UNITS ug/Kg
COMMENTS

ND = Not detected at detection limit

SAMPLE ID PED-B229-SS-03 FRACTION 03A TEST CODE TICV NAME T.I.C. Volatiles
Date & Time Collected 05/12/97 11:15:00 Category SOIL

SUMMARY OF NBS (38,700+ analyte version, April '82)
LIBRARY SEARCH RESULTS OF NONTARGETED PEAKS WITH ESTIMATED
CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
VOLATILE ORGANICS

SCAN NUM.	NAME OF COMPOUND	MF PUR	ASSESSMENT RS	ISO (1)	UK	EST. CONC. (2)	CAS #	RT (3)
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			
			-	-	-			

Notes and Definitions for this Report:
UNITS..... ug/Kg
DATE..... 05/15/97
SPECTROSCOPIST... CMD
Comments:
NO UNKNOWN PEAKS DETECTED.

(1) RS - Reasonable Identification *
ISO- Isomer or similar compound
UK - Unknown, not in NBS Library
(2) Calculated vs nearest eluting internal standard as a simple ratio / proportion.
(3) RT vs 1,4-dichlorobutane for volatiles.
* This shall mean the assessment of the library search by an experienced mass spec. interpretation specialist which would by his/her concurrence be a good identification using WA85-J664, J680, Task V on page A-3 & Task III pg 2-3

LABORATORY CHRONICLE

All samples were chilled to 4°C at the time of receipt at Toxikon.

Toxikon Work Order #: 9705197

Date of Sample Collection: 05/12/97

Sample ID: As per Chain of Custody

ANALYSIS:

Purgeable Organics VOA (8260)	05/15/97, 05/16/97, 05/19/97
Metals (Pb)	
Extraction	05/16/97
Analysis	05/19/97

Holding times were met for all sample analyses.

CONFORMANCE/NON-CONFORMANCE SUMMARY

Work Order #: 9705197

I certify that the reported laboratory results were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel evaluate the information submitted. I certify that the information submitted is true, accurate, and complete to the best of my knowledge and belief. The analyses were conducted without deviation from accepted practices, and were reviewed by the Quality Assurance Department.

Douglas V. Sheeley
Laboratory Manager

7/16/97
Date

CASE NARRATIVE

Work Order: 9705197

All samples were analyzed within the method holding times.

No target compounds were detected in the method blanks.

TOXIKON

GC/MS VOLATILE SURROGATE % RECOVERY (METHOD 8260)

PROJECT # : 9705197
MATRIX : SOIL

SAMPLE NUMBER	S1 (DBF) #	S2 (TOL) #	S3 (BFB) #
METHOD BLANK 5/15	98	96	95
9705197.1	95	94	91
9705197.2	94	93	91
9705197.3	97	93	92
9705197.5	99	94	93
9705197.7	98	96	94
9705197.9	98	98	93
9705197.10	103	95	93
9705197.11	100	94	93
9705197.12	102	98	94
9705197.14	102	98	94
9705197.17	102	96	92
METHOD BLANK 5/16	102	97	96
MS9705197.1	96	94	90
MSD9705197.1	95	93	87
9705197.6	99	82	112
9705197.8	101	91	94
9705197.16	104	87	88
9705197.18	87	107	99
METHOD BLANK 5/19	98	96	95
9705197.4	98	96	95
9705197.13	97	95	94
9705197.15	92	93	89

	QC LIMITS	
	SOIL	WATER
S1 (DBF) = Dibromofluoromethane	(80 - 120)	(86 - 118)
S2 (TOL) = Toluene-d8	(81 - 117)	(88 - 110)
S3 (BFB) = 4-Bromofluorobenzene	(74 - 121)	(86 - 115)

TOXIKON CORP

VOLATILE MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DATE RUN: May 16,1997

METHOD: 8260

WORK ORDER#: 9705197

MATRIX: SOIL

SAMPLE #: 9705197.01

UNITS: ug/Kg

DATA FILES: >G2566
>G2567

TOXIKON PROJECT#: 9705197

COMPOUND	CONC. SPIKE ADDED (ug)	SAMPLE RESULT	CONC. MS	CONC. MSD	%REC MS	%REC MSD	RPD	QC LIMITS * RPD	QC LIMITS * RECOVERY
1,1-Dichloroethene	50	0.00	48.96	48.95	98 OK	98 OK	0 OK	22	59 - 172
Benzene	50	0.00	42.26	42.78	85 OK	86 OK	1 OK	21	66 - 142
Trichloroethene	50	0.00	40.66	40.59	81 OK	81 OK	0 OK	24	62 - 137
Toluene	50	0.00	39.50	39.53	79 OK	79 OK	0 OK	21	59 - 139
Chlorobenzene	50	0.00	40.86	41.87	82 OK	84 OK	2 OK	21	60 - 133

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

* = Values outside of QC limits

TOXIKON

QC SUMMARY - METALS

PROJECT : 9705197
MATRIX : SOIL

SPIKE SAMPLE: 9705197.1
HG SPIKE SAMPLE: NA

ANALYTE	METHOD BLANK	MS (% REC)	LCS (% REC)	DUPLICATE (% RPD)
Pb	ND	64	100	8.2

ACCEPTANCE CRITERIA

ANALYTE	METHOD BLANK	MS (% REC)	LCS (% REC)	DUPLICATE (% RPD)
Ag	BDL	65 - 125	80 - 120	<25
Hg	BDL	75 - 125	80 - 120	<25
All Others	BDL	80 - 120	80 - 120	<25

TOXIKON
15 Wiggins Ave., Bedford, MA 01730
Telephone: (617) 275-3330
Fax: (617) 275-7478

CHAIN OF CUSTODY RECORD

WORK ORDER #: 97-05-197

DUE DATE : 5-20-97

COMPANY: Earth Tech
ADDRESS: 2229 Tomlynn Street
Richmond, VA 23234
PHONE #: (804) 358-5400 FAX #: (804) 358-6868
P.O. #: 21574
PROJECT MANAGER: Janis Crowder
PROJECT ID/LOCATION:

SAMPLE TYPE: 1. WASTEWATER, 2. SOIL, 3. SLUDGE, 4. OIL, 5. DRINKING WATER, 6. WATER (GW/MW/SW), 7. OTHER (SPECIFY)

CONTAINER TYPE: P - PLASTIC, G - GLASS, V - VOA

TOXIKON #	SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER SIZE	CONTAINER TYPE	CONTAINER #	SAMPLING DATE	SAMPLING TIME	PRESERVATIVE	VOX+15 (8260)	LEAD	SPECIAL INSTRUCTIONS/ COMMENTS
1	Ped-B229-SS-01	Gasoline	2oz	Glass	1	5/12/97	1015	HNO3	✓	✓	
2	Ped-B229-SS-02	Gasoline	2oz	Glass	1	5/12/97	1015		✓	✓	
3	Ped-B229-SS-03	Gasoline	2oz	Glass	1	5/12/97	1015		✓	✓	
	~~Ped-B413-R-01~~	~~Water~~	~~2oz~~	~~Glass~~		~~5/12/97~~		HCl			
4	PED-B413NW-SS-04				1		16:15		✓	✓	
5	PED-B413NW-SS-05	GAS	2oz	Glass	1	5/12/97	16:17		✓	✓	
6	PED-B413NW-SS-03				1		16:20		✓	✓	
7	PED-B413NW-SS-04	GAS	2oz	Glass	1	5/12/97	16:23		✓	✓	
8	PED-B413NW-SS-05				1		16:26		✓	✓	
9	" " 06	GAS	2oz	Glass	1	5/12/97	16:30		✓	✓	
10	" " 07				1		16:50		✓	✓	
11	" " 08	GAS	2oz	Glass	1	5/12/97	16:55		✓	✓	
12	PED-B417DW-D-07				1		16:50		✓	✓	
13	PED-B404-1-SS-01	GAS	2oz	Glass	1	5/12/97	18:00		✓	✓	
14	PED-B404-1-SS-02				1		18:00		✓	✓	
15	PED-B404-1-SS-03	GAS	2oz	Glass	1	5/12/97	18:00		✓	✓	
16	PED-B413NW-SS-09				1		16:30		✓	✓	
17	PED-B413NW-SS-10	GAS	2oz	Glass	1	5/12/97	16:35		✓	✓	
18	TRIP BLANK										

SAMPLED BY: [signature] DATE: 5-12-97 TIME: -

RELINQUISHED BY: [signature] DATE: 5-12-97 TIME: -19-00

RELINQUISHED BY: DATE: - TIME: -

METHOD OF SHIPMENT

QUOTATION #:

RECEIVED BY: [signature] DATE: 5-13-97 TIME: 10-00

RECEIVED FOR LAB BY: DATE: - TIME: -

COOLER TEMPERATURE

☐ RUSH ..... BUSINESS DAY TURN AROUND
☑ ROUTINE

Sample disposal information

Are there any other known or suspected contaminants in these samples other than those listed above?

Yes ____ No ✓ If Yes, 1st Known

Appendix G

NJDEP Tank Facility Questionnaire and Site Inspection Report Checklist

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF STATE CASE MANAGEMENT
Registration and Billing Unit
CN 028, Trenton, N.J. 08625-0028
1-609-633-0719

UNDERGROUND STORAGE TANK FACILITY QUESTIONNAIRE

FOR STATE USE ONLY
Check In ☐ Yes ☐ No
STATUS Active ☐ Inactive ☐ COMCODE ☐☐☐☐

FACILITY UST # 0071994

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21, and the Registration and Billing Regulations N.J.A.C. 7:14B-2.

[Check appropriate box(es)]

A. ☐ Is this a registration of a proposed or newly installed underground storage tank? (This form must be filed at least 30 days prior to operation)
B. ☐ Is this a registration of an existing underground storage tank not presently registered?
C. ☒ Is this a correction or amendment to an existing facility registration? UST # 0071994
D. ☐ There have been no changes to the facility registration since last submittal. UST #_____ (Go to certification page for signatures)

If "C" is checked above, please check the appropriate type of change(s) below

☐ Facility Name and/or Address Change
☐ Owner Name and/or Address Change
☐ Facility Operator and/or Address Change
☐ Owner Contact Person Change
☐ Type of Product(s) Stored
☐ Spills, Leaks, Releases
☐ Tank(s) and/or Piping Changes
☐ Closure (Complete Question #13)
☐ Financial Responsibility Change
☐ Substantial Modification(s)
☐ Sale or Transfer (Complete Questions 4,5,6 & 13D)
☒ Other *(please specify)* register unregistered tanks

SECTION A - GENERAL FACILITY INFORMATION

1. Facility Name: Pleidrickitown Supplority Facility

2. Facility Location: Route 130 (NUMBER AND STREET)
Pleidrickitown
(CITY OR MUNICIPALITY)
Salem (COUNTY) NJ (STATE) 08067 (ZIP CODE) (BLOCK) (LOT)

3. Facility Operator: Mst Hutchenstorm (PERSON OR TITLE) Contact Tele. No. 718 352 6053 (Area Code) (Extension)

Operator Address (if different than #2): HQ 777th USAR Regional Supply Command (NUMBER AND STREET)
AFRC-CCNY-EN (Bldg 2101)
Fort Totten (CITY OR MUNICIPALITY)
NY (STATE) 11359-1016 (ZIP CODE)

4. Tank Owner: US Army Training Center, Fort Dix

5. Tank Owner Address: Fort Dix (NUMBER AND STREET)
Burlington (CITY OR MUNICIPALITY)
NJ (STATE) 08640-5501 (ZIP CODE)

6. Contact Person (Tank Owner): Mr. Olt'Shelfskii Contact Tele. No. (Area Code) (Extension)

7. EPA ID # NJ6210090068

8. Total number of regulated underground storage tanks at facility unk *(Complete Section B for each tank)*

9. Total regulated underground storage tank capacity at facility (gallons) unk

10. Facility Type: A ☐ State; B ☐ Commercial/ Industrial; C ☐ County/Municipal; D ☒ Federal; E ☐ Charitable / Public School; F ☐ Residence; G ☐ Other; H ☐ Farm (as defined in N.J.S.A. 54:4-23.1 et seq.)

11. Is a copy of the facility site plan submitted with this registration pursuant to N.J.A.C. 7:14B-2? ☐ YES ☒ NO

SECTION B - SPECIFIC TANK INFORMATION

ALL underground tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes unless previously submitted.

	TANK NO.	TANK NO.	TANK NO.	TANK NO.	TANK NO.
1. Tank Identification Number	229S				
2. CAS Number (hazardous substances only)					
3. Date Tank Installed (Month/Day/Year)	Mo. Day Year unknown	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
4. Tank Size (gallons)	275				
5. Tank Contents (Mark one "X" for each tank)					
A. Leaded gasoline	X				
B. Unleaded gasoline					
C. Alcohol enriched gasoline					
D. Light diesel fuel (No. 1-D)					
E. Medium diesel fuel (No. 2-D)					
F. Waste Oil					
G. Kerosene (No. 1)					
H. Home heating oil (No. 2)					
J. Heating oil (No. 4)					
K. Heavy heating oil (No. 6)					
L. Aviation fuel					
M. Motor oil					
N. Lubricating oil					
P. Sewage					
Q. Sewage sludge					
R. Other hazardous substances (specify)					
S. Hazardous waste (specify ID number)					
T. Mixtures (please specify)					
U. Emergency spill tank (specify substance)					
V. Other petroleum products (please specify)					
W. Other (please specify)					
6. Tank & Piping Construction (Mark one each for both tank & piping)	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping
A. Bare Steel	X				
B. Cathodically protected steel					
C. Fiberglass-coated steel					
D. Fiberglass-reinforced plastic					
E. Internally lined					
F. Other (please specify)					
7. Tank & Piping Structure (Mark one each for both tank & piping)	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping
A. Single wall	X				
B. Double wall					
C. Other (please specify)					
8. Type of Monitoring/Detection System (Mark all that apply for both tank & piping)	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping
A. Statistical Inventory Reconciliation					
B. Manual Tank Gauging					
C. Inventory Control					
D. Interstitial					
E. Precision Test					
F. Ground water observation wells					
G. Vapor observation wells					
H. In-tank (automatic) monitoring gauge					
J. Periodic Tank Test					

Tank Identification Number	TANK NO. 2 2 9 S	TANK NO.	TANK NO.	TANK NO.	TANK NO.
8. Type of Monitoring/Detection System	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping
K. None	X				
L. Other (please specify)					
9. Overfill Protection (tank only) (Mark one X for each tank)					
A. Yes					
B. No	X				
10. Spill Containment Around Fill Pipe (Mark one X for each tank)					
A. Yes					
B. No	X				
11. Tank Status (Mark one X for each tank)	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping	Tank / Piping
A. In-use					
B. Empty less than 12 months					
C. Empty 12 months or more					
D. Emergency spill tank (sump)					
E. Emergency backup generator tank					
F. Abandoned in Place					
G. Removed	X				
H. Other (please specify)					
12. If box 11B, C, or D above has been marked, indicate the estimated date last used (month/day/year)	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
13. Closure Information - Tank ID No.	TANK NO. 2 2 9 S	TANK NO.	TANK NO.	TANK NO.	TANK NO.
	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
A. Date abandoned in place					
B. Date taken temporarily out of service					
C. Date removed	05 12 99				
D. Date of Sale or Transfer					
E. TMS # (if applicable)					
F. ISRA # (if applicable)					

SECTION C - FINANCIAL RESPONSIBILITY

Does this facility have a Financial Responsibility Assurance Mechanism as required in 40 CFR 280? ☐ YES ☐ NO
Please list the appropriate financial information below:

Type _____ Carrier / Issuing Agency _____

____/____/____ Effective Date ____/____/____ Expiration Date _____ Policy Number $_____ Amount

SECTION D - MONITORING SYSTEMS

Does this facility have a release detection monitoring system which is in compliance with N.J.A.C. 7:14B-6? ☐ YES ☐ NO
If "No", please be aware that the facility must meet the appropriate deadline. (See "Dates to Know" on Page 4)

SECTION E - RECORDKEEPING/COMPLIANCE

Please answer all the questions in this section on a facility basis. Any one tank not in compliance requires a "NO" answer for the entire facility.

1. Does this facility have cathodic protection systems for all steel tanks and piping? ☐ YES ☐ NO
   If "Yes", are the systems properly operated and maintained pursuant to N.J.A.C. 7:14B-5? ☐ YES ☐ NO
2. Are the performance claims and documentation of monitoring systems maintained by the owner or operator pursuant to N.J.A.C. 7:14B-5? ☐ YES ☐ NO
3. Are the proper monitoring, testing, sampling, repair and inventory records kept on-site pursuant to N.J.A.C. 7:14B-5 and 6? ☐ YES ☐ NO
4. Is the proper Release Response Plan kept on-site pursuant to N.J.A.C. 7:14B-5? ☐ YES ☐ NO
5. Does the facility have spill and over fill protection systems pursuant to N.J.A.C. 7:14B-4? ☐ YES ☐ NO
6. Have all Fill Ports been permanently marked as per API #1637 pursuant to N.J.A.C. 7:14B-5? ☐ YES ☐ NO

IMPORTANT INFORMATION

FEE:	Please make checks payble to: **"Treasurer, State of New Jersey"**. Use of the enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in N.J.A.C. 7:14B. All Initial Registration fees are $100 per facility.
PENALTY:	Failure by owner or operator of a regulated underground storage tank to comply with any requirement of the State UST Act or regulations may result in the penalties set forth in N.J..S.A. 58:10A-10.
EMERGENCY:	If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a day.
UPGRADE EXEMPTION:	Residential heating oil underground storage tanks are exempt from all upgrade requirements.

DATES TO KNOW (critical deadlines)

December 22, 1988	—	All new federally regulated tank systems must have cathodic protection and spill/overfill protection.
September 4, 1990	—	All new State-only regulated tank systems must have cathodic protection and spill/overfill protection.
December 22, 1990	—	All federally regulated piping must have begun leak detection.
February 19, 1993	—	All federally regulated tank systems must maintain financial responsibility assurance.
December 22, 1993	—	All federally regulated tank systems must have begun leak detection.
December 22, 1998	—	All regulated tanks shall install cathodic protection and spill/overfill protection.

CERTIFICATIONS

NOTE: IF THE PERSON SIGNING CERTIFICATION NO. 2 IS THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1, THEN CERTIFICATION NO. 2 NEED NOT BE SIGNED. (If different persons are required to sign No. 1 and No. 2, then they must do so.)

CERTIFICATION NO. 1:

Must be signed by the highest ranking individual at the facility with overall responsibility

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name) _____ (Signature) _____

(Title) _____ (Date) _____

CERTIFICATION NO. 2:

Must be signed as follows:

- For a corporation, by a principal executive officer of at least the level of vice president
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official
- For persons other than indicated above, by the person with legal responsibility for the site

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name) _____ (Signature) _____

(Title) _____ (Date) _____

CERTIFICATION NO. 3:

If applicable, must be signed by the individual who is certified to perform services.

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

JULIAN T. CANUSO JR. (Typed / Printed Name) Project Engineer (Title) Julian T. Canuso Jr. (Signature) 7-10-97 (Date)

(Name of Firm, if applicable) _____ (N.J. Certification Number) _____

New Jersey Department of Environmental Protection
Site Remediation Program

Site Investigation/Remedial Investigation Report Checklist

Oversight Document:
- ☑ UST Regulations
- ☐ Administrative Consent Order (ACO)
- ☐ Memorandum of Understanding
- ☐ Industrial Site Recovery Act (ISRA)
- ☐ Memorandum of Agreement (MOA)

A. Case Name (and AKA): Sievers-Sandberg US Army Reserve Center

Address: Building 273, Route 130

Municipality/County: Pedricktown

RP Contact: _____ Telephone: _____

B. (Check as appropriate)

- ☑ Site Investigation (SI) Report
- ☐ Remedial Investigation (RI) Report

C. (Complete all that apply)

- Assigned Case Manager _____
- ISRA Case Number _____ (5 digits)
- UST Registration Number 0071994 (7 digits)
- Incident Report Number ____-____-____-_____-____ (10 or 12 digits)
  ____-____-____-_____-____
- Tank Closure Number C9 7 - 0177 C9___-_____ C9___-_____ (7 characters)
  C9___-_____ C9___-_____ C9___-_____
- EPA ID Number NJ_____ (12 characters)

D. (Circle "Yes" or "No" as applicable for each statement. If the statement is not applicable, indicate "N/A")

1) All "Areas of Concern", as defined in N.J.A.C. 7:26E-1.8 or 40 CFR 300.5, noted in the attached report were sampled pursuant to N.J.A.C. 7:26E-3 and 4, and analyzed pursuant to Table 2-3, as applicable ..... (Yes) No
(If the answer to #1 is "No", answer 1A & 1B. If the answer is "Yes", go to #2)

   A) Did the Department grant a variance from any of the requirements of N.J.A.C. 7:26E-2 through 6, pursuant to N.J.A.C. 7:26E-1.6(d)1 and 2? ..... Yes No
   B) If alternative sampling and/or investigatory methods were utilized without Department pre-approval, is the documentation required by N.J.A.C. 7:26E-1.6(c) provided? ..... Yes No

2) The attached report documents all individual contaminants below most recently published residential and impact to ground water soil cleanup criteria contained in the "Site Remediation Newsletter" ..... (Yes) No

3) The attached report includes results from a ground water investigation conducted pursuant to N.J.A.C. 7:26E-3.7 or 4.4. (If "No", go to question 5, if "Yes", answer question 4) ..... Yes (No)

4) The attached report documents all individual contaminants below applicable Ground Water Quality Standards as contained in N.J.A.C. 7:9-6 ..... Yes No

5) The attached report was submitted in response to a discharge of any contaminants as defined at N.J.A.C. 7:26E-1.8 ..... Yes (No)
If answer to #5 was "Yes" continue to 5A through 5E. If answer is "No" go to #6.
Pursuant to N.J.A.C. 7:26E-3.7 and/or 4.4:

   A) Was the discharge associated with a substance with a solubility greater than 100 milligrams per liter (i.e. gasoline, #2 heating oil etc.)? ..... Yes No
   B) Does all the soil between the discharge (last depth of contamination above remediation standard) and ground water/bedrock contain less than 15% silt and clay? ..... Yes No

C) If a soil sample was collected 2 feet from the saturated zone or bedrock, does it contain a contaminant above the impact to ground water remediation criteria? ..... Yes No

D) Are any of the soil sampling results above the impact to ground water remediation criteria anywhere in the soil column and the contaminant is not going to be actively remediated? ..... Yes No

E) Was a sheen or product noted on the ground water? ..... Yes No

6) Were any wastes generated for disposal during the SI or RI? ..... (Yes) No

A) The attached contains a "soil reuse" proposal or report, including characterization sampling, as requested in the May 14, 1993, "Management of Excavated Soils" guidance document ..... Yes No

B) The attached report contains a request for a Waste Flow Exemption ..... Yes No

C) The attached report contains documentation of the quantity, waste classification and status of all excavated soil/waste disposal (including drum contents, tank sludge/rinsate, overburden soils, etc.) remediation or reuse and clean fill documentation ..... Yes (No)

Site Investigation (SI) and Remedial Investigation (RI) Report Submittal Checklist

E. SI Reporting Requirements

(Note page, figure, table or plate number(s) or NA for Not Applicable)

1) Historical Information (including maps and air photos) ..... Pg. No. 2

2) Physical Setting ..... Pg. No. 2

3) Technical Overview of investigation execution and results including reliability of lab data, summary of contamination, information on waste characterization and any other significant events ..... Pg. No. 1

4) Findings and recommendations by Area of Concern (AOC) ..... Pg. No. 4

A) Description of each AOC including size (i.e. size of drum pad, volume of impoundment or area, length of UST and piping), suspected and actual contamination (presence of discoloration, stressed vegetation, corrosion holes in USTs, description of the excavation, if any), source or potential source of discharge and field measurements ..... Pg. No. 2

B) Results of Analyses ..... Pg. No. App. F

C) Fully supported Recommendation for additional remedial activities or "No Further Action" ..... Pg. No. 4

5) Summary Table of analytical methods and quality assurance indicators pursuant to N.J.A.C. 7:26E-2.2 (a)1v ..... Pg. No. 3

6) Laboratory Quality Assurance and Quality Control Deliverables pursuant to N.J.A.C. 7:26E-2.1 and Appendix A (include lab deliverable checklist) ..... Pg. No. App. F

A) Nonconformance Summary signed by the Laboratory ..... Pg. No. —

B) Chain of Custody ..... Pg. No. App. F

7) Discussion of why the analytical methods chosen for each sample matrix accurately represent all of the contaminants of concern at the facility ..... Pg. No. —

8) Table summarizing sampling results, including media, sampling depth, field and laboratory identification numbers, date and time of sampling, analytical results, and comparison to applicable remediation standards (ARS). Identify all samples exceeding ARS and all samples with MDLs or PQLs exceeding ARS. Solid results on dry weight basis (in mg/Kg) and aqueous samples in ug/l ... Pg. No. 3

9) Scaled Site map and AOC base map(s) with sample locations, sample depth and contaminant levels. (see N.J.A.C. 7:26E-3.10 (d)1 or 4.9 (d)2 for map details) ..... Pg. No. App. A

10) Boring/Stratiographic logs including instrument readings and physical characteristics ..... Pg. No. —

11) Boring/Stratiographic cross sections ..... Pg. No. —

12) Boring, piezometer and monitoring well records with applicable permit numbers ..... Pg. No. —

F. RI Reporting Requirements (Include all items above plus the following..)

13) Additional information collected pursuant to N.J.A.C. 7:26E-4.1 and any work plan approved per N.J.A.C. 7:26E-4.8 (i.e. well search information results/summary, subsurface gas threats, investigation of sediment, surface water, wetlands), as applicable ..... Pg. No. _____

14) Well Search Results (pursuant to 7:26E-4.4(h) and Appendix B) ..... Pg. No. _____

15) Description of treatability bench scale or pilot studies as well as data to develop permit limits for air, surface water and/or ground water discharges ..... Pg. No. _____

16) Average contaminant concentrations for each AOC (see N.J.A.C. 7:26E-4.9 (c)3i), and a description of the procedures used for averaging ..... Pg. No. _____

17) Well casing and ground water elevations (include well Certifications A and B) ..... Pg. No. _____

18) Ground water temperature, pH and conductivity measurements ..... Pg. No. _____

19) Review of inventory control records to identify product loss ..... Pg. No. _____

20) Results of an Ecological Assessment, if conducted ..... Pg. No. _____

21) Summary of Landfill records, if site is a landfill ..... Pg. No. _____

22) Site base maps with sampling locations* and diagrams shall include:

A) ground water elevation contour maps with flow direction, and tidal studies, if applicable ..... Pg. No. _____
B) top of bedrock contour map, if bedrock was encountered ..... Pg. No. _____
C) contaminant isopleth maps for ground water showing horizontal/vertical extent of contamination above applicable standards, and free product ..... Pg. No. _____
D) isopleth maps for soil contaminants (required if more than 25 soil samples collected; suggested for fewer than 25 samples) ..... Pg. No. _____
E) horizontal and vertical distribution of contaminants in soil and sediment with sample numbers* and contaminant concentrations ..... Pg. No. _____
F) all ground water sampling points* including open hole and screened intervals ..... Pg. No. _____
G) if applicable, a map of surface water, structure and airborne contaminants ..... Pg. No. _____
H) photos may be submitted of sample locations (identify photo location on site map) ..... Pg. No. _____
I) other data collected (e.g. soil gas), specify type ..... Pg. No. _____

*NOTE: The same alpha/numeric sample label used in the RI workplan shall be used in the RI Report

G. Report Contents Completeness and Two Part Certification:

23) The attached report conforms to the specific reporting requirements listed at N.J.A.C. 7:26E-3.10 for a SI Report or N.J.A.C. 7:26E-4.9 for a RI Report ..... (Yes) No

Name: Julian T. Caruso Signature: [signature] UST Cert. No. U500516

Firm: _____ Firm's UST Certification Number: _____

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

24) Two part certification signed and completed pursuant to one of the following requirements (indicate the page number next to the appropriate regulatory citation):

A) N.J.A.C. 7:26C-1.2 ..... Pg. No. _____
B) N.J.A.C. 7:14B-2.3 ..... Pg. No. _____
C) N.J.A.C. 7:26B-1.13 ..... Pg. No. _____